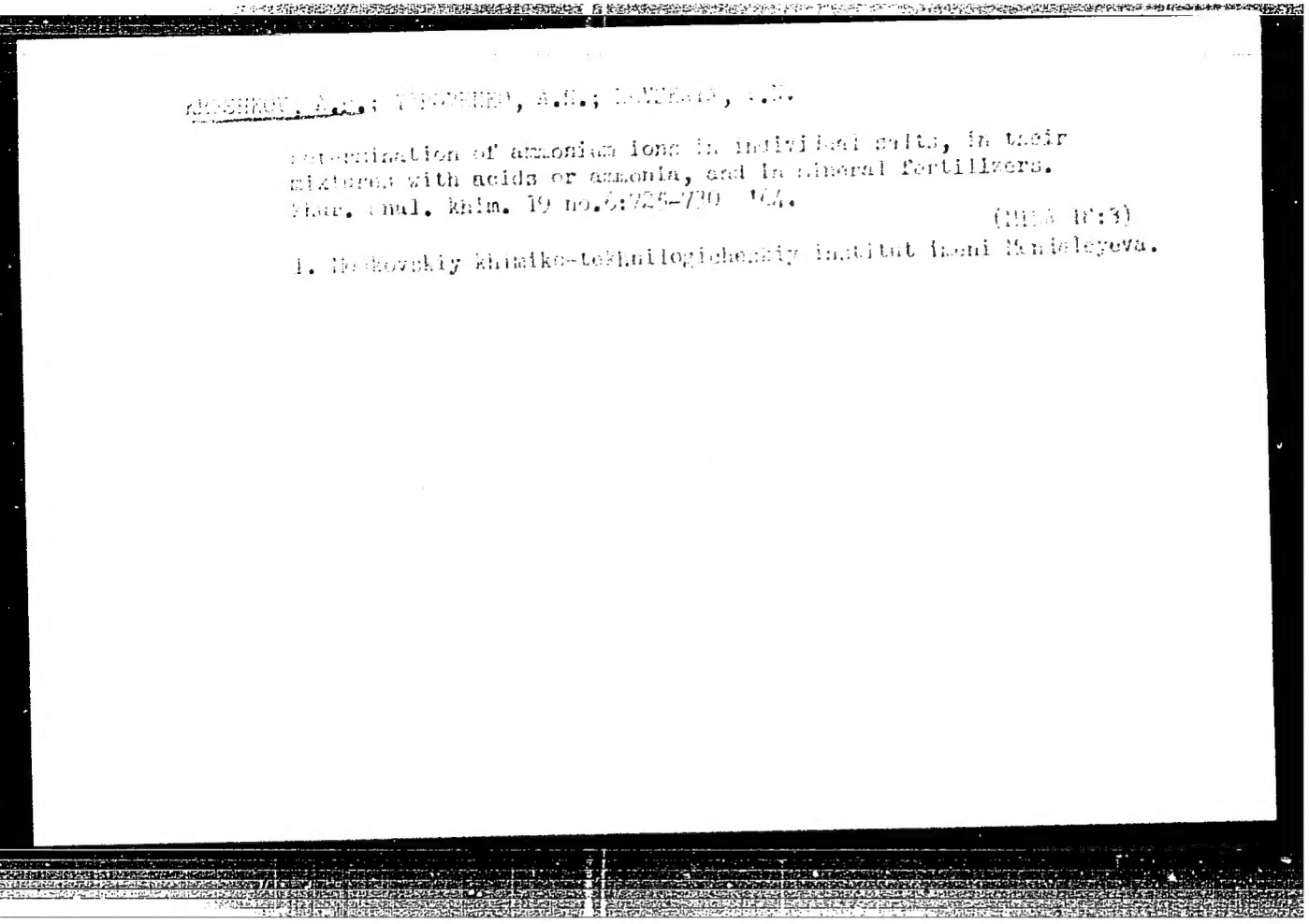
KRESHKOV, A.P.; ALDAROVA, N.Sh.

Potentiometric titration of heterocyclic nitrogen-containing compounds and their mixtures in a methyl ethyl ketone medium. Zhur. anal. khim. 19 no.5:537-540 '64. (MIRA 17:8)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni Mendeleyeva.



[illegible], A.A.; [illegible], A.F.; [illegible], V.N.

Determination of ammonium ions in individual salts, in their mixtures with acids or ammonia, and in mineral fertilizers. Zhur. anal. khim. 19 no.6:725-730 '64. (MIRA 17:8)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni Mendeleyeva.

KRESHKOV, A.P.; BYKOVA, L.N.; PEVZNER, I.D.

Potentiometric method of titration of diamines and their mixtures in a medium of differentiating solvents. Zhur. anal. khim. 19 no.7: 890-896 '64. (MIRA 17:11)

1. Mendeleev Moscow Chemico-Technological Institute.

BALYATINSKAYA, L.N.; KRESHKOV, A.P.; TUR'YAN, Ya.I.

Potentiometric method for the determination of vinyl monomers.
Zhur. anal. khim. 19 no.8:1025-1028 '64.
(MIRA 17:11)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni Mendeleyeva i Yaroslavskiy nauchno-issledovatel'skiy institut monomerov dlya sinteticheskogo kauchuka.

L 52330-65 EPF(c)/EWP(j)/EWT(m) Pc-4/Pr-4 RM

ACCESSION NR: AP5015697 UR/0075/64/019/010/1177/1182 20 19 B

AUTHOR: Kreshkov, A. P.; Drozdov, V. A.; Kolchina, N. A.

TITLE: Determination of methylphosphinic acid and its derivatives by titration in aqueous media

SOURCE: Zhurnal analiticheskoy khimii, v. 19, no. 10, 1964, 1177-1182

TOPIC TAGS: phosphinic acid, titrimetry

Abstract: The determination of methylphosphinic acid, methylphosphinyl dichloride, and the monoisobutyl ester of methylphosphinic acid by titration in nonaqueous solutions was studied. Acetonitrile, methyl ethyl ketone, and pyridine were tested as the medium for the titration of methylphosphinic acid; acetonitrile, methyl ethyl ketone, and a mixture of diethyl ether and methyl ethyl ketone (1:1) were used as the titration medium for the acid ester. A 0.1% acetonitrile solution of quinizarine (1,4-dihydroxyanthraquinone) was used as the indicator in methyl ethyl ketone and acetonitrile medium, as well as in the mixture of solvents; the titration reagent was a 0.1 N benzene-methanol solution of tetraethylammonium hydroxide. In the indicated solvents, methylphosphinic acid

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L 52330-65

ACCESSION NR: AP5015697

and its monoisobutyl ester are titrated as monobasic acids. Upon addition of 0.2% H_2O to methyl ethyl ketone, methylphosphinic acid begins to dissociate and is titrated as a dibasic acid, the second potential drop increasing as the amount of added water is raised to 1.5%. The method of direct titration with a solution of sodium methylate in absolute benzene medium in the presence of thymolphthalein and a method of reverse titration, based on the reaction of dimethylphosphinyl dichloride with an excess of a 0.1 N solution of piperidine in acetonitrile, followed by potentiometric titration of the excess piperidine with a 0.1 N aqueous solution of HCl, was used to determine the acid dichloride. In addition to the quantitative determination of the phosphinic acid and derivatives as individual compounds, two-component (methylphosphinic and hydrochloric acids) and three-component mixtures (methylphosphinic acid, hydrochloric acid, and the acid ester) were analyzed in absolute methyl ethyl ketone medium by potentiometric titration with a 0.1 N solution of tetraethylammonium hydroxide, without the addition of water and with an addition of 4.5% water. In the titration of two-component mixtures in absolute methyl ethyl ketone, two potential drops were observed; however, differentiation was not very distinct. The addition of 4.5% water before the beginning of titration produced three distinct potential drops: 1) neutralization

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L 52330-65

ACCESSION NR: AP5015697

of HCl (quantitative results); 2) neutralization of the first stage of methylphosphinic acid (quantitative results); 3) neutralization of the second stage of methylphosphinic acid (unstable results). In the titration of three-component mixtures, two potential drops were obtained in absolute methyl ethyl ketone, the first corresponding to the neutralization of hydrochloric acid, the second to the sum of the first stage of methylphosphinic acid and the acid ester, overestimated results being obtained according to the second drop. The addition of 4.5% water to the methyl ethyl ketone before titration produced three distinctly differentiated potential drops: quantitative titration of HCl, quantitative titration of the sum of the first stage of methylphosphinic acid and the acid ester, and titration of the second stage of methylphosphinic acid (unstable results). Orig. art. has 2 formulas, 5 graphs, and 4 tables.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva (Moscow Chemico-Technological Institute)

SUBMITTED: 18Feb64 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 005 OTHER: 011 JPRS

Card 3/3

KRESHKOV, A.P.; MIKHAYLENKO, Yu.Ya.; TUMOVSKIY, L.A.

Differentiated determination of weak acids by the method of spectrophotometric titration in nonaqueous solutions. Zhur. anal. khim. 19 no.11:1293-1298 '64.

(MIRA 18:2)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni Mendeleyeva.

KRYSHKOV, A.P.; VASIL'YEV, V.I.

Analysis of a mixture of nitro-ortho-toluidine isomers and a mixture of nitro-para-toluidine isomers by a method of spectrophotometric titration in nonaqueous solutions. Zhur. anal. khim. 19 no.12:1508-1512 '64 (MIRA 18:1)

1. D.I. Mendeleyev Moscow Chemico-Technological Institute.

KRESHKOV, A.P.; BYKOVA, L.N.; SKRIPKO, L.A.; PEVZNER, I.D.

Differentiated determining of diamines used as rubber stabilizers with the method of titration in nonaqueous solutions. Kauch. i rez. 23 no.12:47-50 D '64. (MIRA 18:2)

1. Moskovskiy khimiko-tekhnologicheskiy institut im. D.I. Mendeleyeva i Nauchno-issledovatel'skiy institut khimikatov dlya polimernykh materialov.

ACCESSION NR: AP4033609 S/0032/64/030/004/0413/0415

AUTHORS: Kreshkov, A. P.; Drozdov, V. A.; Tarasyants, R. A.

TITLE: Tritration of alkylthiocyanatesilanes in nonaqueous media

SOURCE: Zavodskaya laboratoriya, v. 30, no. 4, 1964, 413-415

TOPIC TAGS: alkylthiocyanatesilane, alkylthiocyanatesilane titration, sodium methylate titration, LP 58 potentiometer

ABSTRACT: A method was developed for the quantitative determination of the SCN groups in alkylthiocyanatesilanes of the general formula $R_nSi(SCN)_{4-n}$, where the R is a methyl, ethyl, or ethylene group. The method was based on titration with a methanol solution of sodium methylate in a medium of acetonitrile, or methyl, ethyl, n-propyl, and n-butyl alcohol. In one modification the titration was conducted in the presence of indicators of the oxyanthraquinone series (such as quinizarin, purpurin, alizarin, and anthrarufin) used in the form of saturated solutions in acetonitrile. In the second modification the titration was conducted by means of a LP-58 potentiometer with a system of glass and calomel electrodes. The neutralization point corresponded to a sharp jump (about 400 mv) of the

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ACCESSION NR: AP4033609

potential. The procedure consisted of placing a 0.03-0.09 gm sample into a 50 ml beaker, adding 15 ml of absolute alcohol or of anhydrous acetonitrile, and dissolving the sample. Titration was started 1-2 minutes after the immersion of the electrodes. The potential of the system was established after the addition of 0.04-0.06 ml of a 0.1 normal solution of CH_3ONa. In the region of the potential jump the solution was added drop by drop. The equivalence point is located by means of a graph. The potentiometric method permits a separate determination of various alkylthiocyanatesilanes in a mixture. Orig. art. has: 2 tables and 2 charts.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva (Moscow Chemicotechnological Institute)

SUBMITTED: 00 DATE ACQ: 28Apr64 ENCL: 00

SUB CODE: GH NO REF SOV: 005 OTHER: 001

Card 2/2

KRESHKOV, A.P.; MIKHAYLENKO, Yu.Ya.; KUCHKAREV, Ye.A.

Spectral determination of silicon in monomeric and polymeric organosilicon compounds. Zav. lab. 30 no.5:555-556 '64. (MIRA 17:5)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni D.I. Mendeleyeva.

KRYUKOV, A.P.; BORK, V.A.; APARSHEVA, M.I.

Amperometric titration of unsaturated organosilicon compounds in nonaqueous media. Zav. lab. 30 no.10:1208-1211 '64. (MIRA 18:4)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni Mendeleyeva.

KRESHKOV, A.P.; SAYUSHKIN'A, Ye.N.; DROZDOV, V.A.

Preparation of tetramethyl ammonium hydroxide solution by the ion-exchange method. Zhur. prikl. khim. 37 no.9:1894-1898 S '64. (MIRA 17:10)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni Mendeleyeva.

L 23512-65 EWT(m)/EPF(c)/EWP(v)/EPR/EWP(j)/T Pr-4/Pc-4/Ps-4 WW/RM

ACCESSION NR: AP4047126 S/0080/64/037/010/2278/2283

AUTHOR: Kreshkov, A. P.; My*shlyayeva, L. V.; Soboleva, D. A.

TITLE: The reactions of certain alkyl-alkyloxy silanes with aqueous alkali zincate and beryllate solutions

SOURCE: Zhurnal prikladnoy khimii, v. 37, no. 10, 1964, 2278-2283

TOPIC TAGS: alkylalkyloxysilane, alkylsilanolate zincate, alkylsilanolate beryllate, impregnant, surfactant impregnant, glass cloth impregnant

ABSTRACT: The reactions of trimethylmethoxy silane (I) and of dimethyldimethoxysilane (II) with aqueous alkali solutions of sodium zincate (III) and sodium beryllate (IV) were investigated. Reactions of I with III and IV within a wide molar ratio of the reactants (Si:Zn(Be) = 2:1, 1:1, 1:2 and 1:3) all gave products having the molecular compositions $6(CH_3)_3SiONa.Na_2ZnO_2.3OH_2O$ (sodium monozincate of 6-trimethylsilanolate), and $3(CH_3)_3SiONa.Na_2BeO_2.22H_2O$ (sodium monoberyllate of 3-trimethylsilanolate), respectively. The

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L 23512-65

ACCESSION NR: AP4047126

2

$3(CH_3)_2Si(OH)ONa.Na_2ZnO_2.10H_2O$ (sodium monozincate of 3-dimethylhydroxylsilanolate) and $3(CH_3)_2Si(OH)ONa.Na_2BeO_2.22H_2O$(sodium monoberyllate of 3-dimethylhydroxysilanolate) were obtained by reaction of II with III and IV solutions only when the reactant molar ratio was such that Si:Zn(Be) was 4:1. Other reactant ratios gave mixtures of products of variable compositions. The obtained products were subjected to IR spectroscopic, ionizing x-ray and microcrystalloscopic analyses. The products could be applied to cotton and glass cloth as impregnants in the form of aqueous alcoholic solutions to reduce their adhesion to polymeric materials such as polyvinyl chloride. Orig. art. has: 4 figures

15

15

ASSOCIATION: None

SUBMITTED: 02Oct62 ENCL: 00

SUB CODE: OC, GC NO REF SOV: 010 OTHER: 001

Card 2/2

ACCESSION NR: AP4033407 S/0076/64/038/003/0738/0740

AUTHOR: Kreshkov, A. P.; Vlasov, S. V.; Drozdov, V. A.; Vlasova, Ye. G.

TITLE: Study of certain properties of oxygen containing silicon organic compounds in liquid hydrogen fluoride medium.

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 3, 1964, 738-740

TOPIC TAGS: silicon organic compound, hydrogen fluoride, sodium triethyl silanolate, triethyl silinole, hexamethyldisiloxane, hexaethyldisilocane, electrical conductivity method, dissociation

ABSTRACT: Oxygen containing silicon organic compounds, such as sodium triethylsilanolate $(C_2H_5)_3SiONa$ (I), triethylsilanole $(C_2H_5)_3SiOH$ (II), hexamethyldisiloxane $[(CH_3)_3Si]_2O$ (III) and hexaethyldisilocane $[(C_2H_5)_3Si]_2O$ (IV) in a liquid hydrogen fluoride medium were studied by the electrical conductivity method. The specific and equivalent electrical conductance were calculated for the studied compounds. Liquid hydrogen fluoride was chosen as a solvent because of its high dielectric constant, low viscosity, low molecular association and the fact that most compounds, when dissolved in hydrogen fluoride, act as bases. The dissolving

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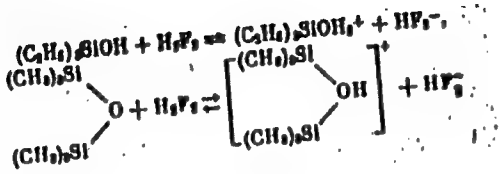
ACCESSION NR: AP4033407

process of organic compounds in hydrogen fluoride is assumed to proceed by the attachment of hydrogen fluoride to the dissolving compound accompanied by the dissociation of the solvate into a complex cation and hydrofluoride ion. All the compounds used in the experiment were thoroughly purified. Hydrogen fluoride was purified by a fractionation copper column and had a specific electrical conductivity of $1.29 \cdot 10^{-4}$ - $9.43 \cdot 10^{-4}$ ohm^{-1}.cm^{-1}, which corresponded to 0.01 to 0.05 % water content. The electrical conductivity was measured at 1000 cycles at -10 _ 0.1 C and the results of these measurements are given in a table. It was found from the specific conductance that compound II behaved analogously to alcohols (ethanol) and displayed strong basicity. Compounds III and IV were analogous to ethers (diethyl ether) with weakly basic properties. It is concluded that the dissociation of the silicon organic compounds in liquid hydrogen fluoride is similar to the silicon organic compounds in liquid hydrogen fluoride is similar to the dissociation of organic compounds and can be expressed as follows:

Card 2/3

ACCESSION NR: AP4033407



Orig. art. has: 1 table.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva (Moscow Institute of Chemical Technology)

SUBMITTED: 04Mar63 ENCL: 00

SUB CODE: OC NO REF SOV: 004 OTHER: 007

Card 3/3

KRESHKOV, A.P., VASIL'YEV, V.I.

Differentiating effect of nonaqueous solvents as dependent on the titrimetric method of determining acids and bases. Trudy MKHTI no.44, 125-131 '64. (MIRA 18:1)

KRESHKOV, A.P.; BALYATINSKAYA, L.N.; TUR'YAN, Ya.I.

Determination of the degree of purity of styrene by the indirect potentiometric method in an anhydrous medium. Plast. massy no.2: 52-53 '65. (MIRA 18:7)

KRENKOV, A.P.; LORK, V.A.; APARSHEVA, M.I.

Quantitative determination of double bonds in organosilicon compounds containing silicon hydride groups. Plast. massy no.4:63-65 '65.
(MIRA 18:6)

KRESHKOV, A.P.; KHUDYAKOVA, T.A.; AUROV, A.P.; ARBATSKIY, A.P.

Chronoconductometric method for determining maleic anhydride in its copolymer with styrene and sodium styromaleinate. Plast. massy no.7: 51-55 '65. (MIRA 18:7)

KRESHKOV, A.P.; MIKHAYLENKO, Yu.Ya.; SELETSKAYA, L.P.

Using the infrared spectroscopy method for determining unsaturated groups in silicon organic compounds. Inst. mass no.8:48-50 '65. (MIRA 18:9)

KREshkov, A.P.; YAROVENKO, A.N.; SAYUSHKINA, Yu.N.; ZELENINA, L.N.

Using the method of differential titration in nonaqueous solutions for the determination of salts. Izv.vys.ucheb.zav.; khim. i khim. tekh. 8 no.2:196-202 '65. (MIRA 18:8)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni Mendeleyeva, kafedra analiticheskoy khimii.

L 19387-66 EWT(m)/EWP(j) RM
ACCESSION NR: AP5015574 UR/0153/65/008/002/0316/0319

AUTHOR: Kreshkov, A. P., Aldarova, N. Sh.

TITLE: Potentiometric method of determining monomeric, model, and polymeric compounds of the benzimidazole series

SOURCE: IVUZ. Khimiya i khimicheskaya tekhnologiya, v. 8, no. 2, 1965, 316-319

TOPIC TAGS: benzimidazole, titrimetry, polyamine, potentiometric titration, perchloric acid

ABSTRACT: The determinations were made using a glass - calamel electrode system. The medium for the titration of the model and monomeric compounds was methyl-ethyl-ketone, and the titrating agent was a 0.1 N solution of perchloric acid in methyl-ethyl-ketone. Fig. 1 of the Enclosure shows the titration curves of the monomeric and model compounds; the error in the quantitative determination of these compounds was 1-3%. Curves obtained by titrating polybenzimidazoles and polyaminoamide are shown in Fig. 2 of the Enclosure. These studies provide a confirmation of the structure of the monomer unit of polybenzimidazoles (each such unit containing an NH group which is titrated), and are an indirect proof of the mechanism governing the formation of these compounds from tetramines and dicarboxylic aliphatic and aromatic acids and their esters. Orig. art.

Card 1/4

L 19387-66
ACCESSION NR: AP5015574

has: 2 figures and 2 tables.

ASSOCIATION: Kafedra analiticheskoy khimii, Moskovskiy khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva (Department of Analytical Chemistry, Moscow Chemical Engineering Institute)

SUBMITTED: 01Jul63 ENCL:02 SUB CODE: OC

NO REF SOV: 004 OTHER: 004

2/4
Card

L 19387-66

ACCESSION NR: AP5015574

ENCL: 01

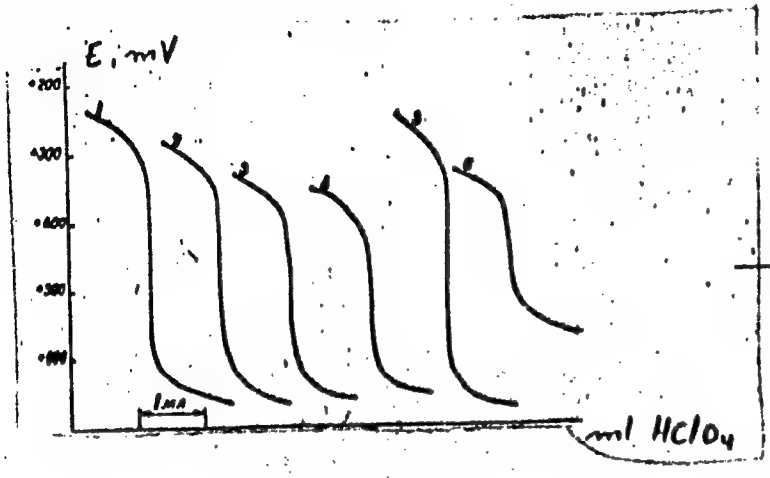


Fig. 1. Potentiometric titration curves of monomeric and model compounds of the benzimidazole series by a 0.1 N solution of perchloric acid in methyl-ethyl-ketone. 1 - methyl-benzimidazole; 2 - 3,3'-diaminobenzidine; 3- 3,3'4,4'-tetraaminodiphenylmethane; 4 - 2,2'-dimethyl-5,5''-bibenzimidazole; 5- diphenylmethane-2,2'-dimethyl-5,5'-bibenzimidazole; 6 - o-phenylenediamine.

Card 3/4

L 19387-66 ENCL: 02

ACCESSION NR: AP5015574 D

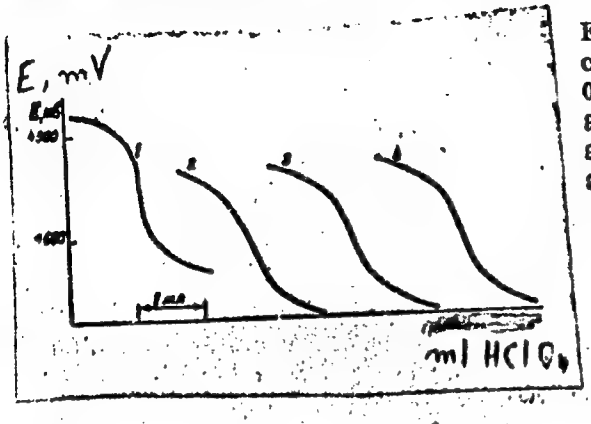


Fig. 2. Potentiometric titration curves of polymer compounds by a 0.1 N solution of perchloric acid in a 4:1 methyl-ethyl-ketone: formic acid solvent. 1, 2, 3-polybenzimidazoles; 4 - polyaminoamide.

Card 4/4

L 1343-66 EWT(m)/EPF(c)/EWP(j)/T/EWA(c) RPL WW/RM

ACCESSION NR: AP5024362 UR/0286/65/000/015/0031/0031
661.718.1'5:547.412:26'241'245

AUTHOR: Kreshkov, A. P.; Drozdov, V. A.; Orlova, I. Yu. 44,55 44,55 44,55 38 B

TITLE: A method for producing trialkyl difluorophosphate silanes. Class 12, No. 173228 44,55

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 15, 1965, 31

TOPIC TAGS: silane, organosilicon compound, ammonium phosphate, fluorinated organic compound, chlorinated organic compound

ABSTRACT: This Author's Certificate introduces: 1. A method for producing trialkyl difluorophosphate silanes, e. g. trimethyl, triethyl, dimethylethyl and diethylpropyl difluorophosphate silanes. Trialkyl chlorosilanes are interacted with ammonium difluorophosphate in an organic solvent with the application of heat. A modification of this method in which the reaction mixture is heated to boiling.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva (Moscow Institute of Chemical Technology) 44,55

SUBMITTED: 13Apr63 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 000 OTHER: 000

Card 1/1

KRESHKOV, A.P.; KHUDYAKOVA, T.A.

Chronoconductometric method for determining weak acids.
Zhur. anal. khim. 20 no.5:625-629 '65. (MIRA 18:12)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni D.I. Mendeleyeva i Gor'kovskiy politekhnicheskiy institut imeni A.A. Zhdanova. Submitted March 27, 1964.

KRESHKOV, A.P.; [illegible]

Amperometric and visual titration of [illegible] with cadmium nitrate in anhydrous acetic acid. Zhur. anal. khim. 20 no.6:704-708 '65. (MIRA 18:7)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni Mendeleyeva.

KRESHKOV, A.P.; BYKOVA, L.M.; KIRILLOVA, O.F.

High-frequency titration of dicarboxylic acids in a dimethyl- formamide medium. Zhur. anal. khim. 20 no.8:840-844 '65. (MIRA 18:10)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni D.I. Mendeleyeva.

KRESHKOV, A.P.; CHIVIKOVA, A.N.; ZAGOROVSKAYA, A.A.

Rapid method of determining free amorphous silicon dioxide in clays. Zhur. anal. khim. 20 no. 11:1253-1255 '65 (MIRA 19:1)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni D.I. Mendeleyeva. Submitted January 8, 1965.

KRESHKOV, A.P.; MYSHLYAYEVA, L.V.; KUCHKAREV, Ye.A.; SHATUNOVA, T.G.

Quantitative determination of titanium in organotitanium and organosilicotetanium compounds. Zhur. anal. khim. 20 no.12: 1325-1329 '65. (MIRA 18:12)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni D.I. Mendeleyeva. Submitted November 28, 1964.

KRESHKOV, A.P.; YAROVENKO, A.N.; MILAYEV, S.M.; ALDAROVA, N. Sh.

Analysis of rare-earth salts in nonaqueous solutions. Zhur. anal. khim. 21 no. 1:34-39 '66 (MIRA 19:1)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni Mendeleyeva i Vostochno-Sibirskiy tekhnologicheskiy institut, Ulan-Ude.

KRESHKOV, A.P.; BALYATINSKAYA, L.N.

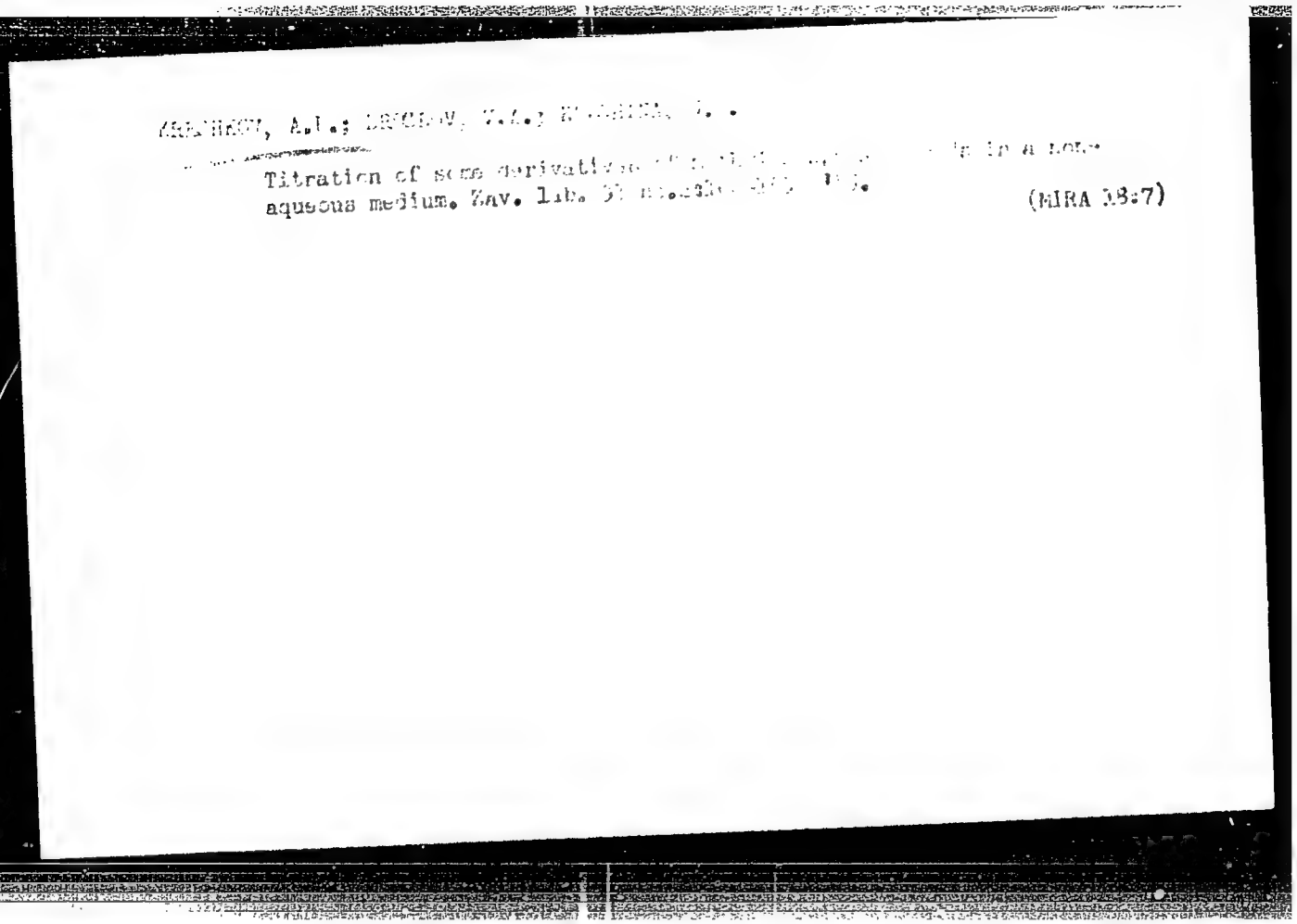
Using the mercury-acetate method for determining the general non-saturation of butyl rubber. Kauch. i rez. 24 no.10:55-56 '65.
(MIRA 18:10)

1. Moskovskiy ordena Lenina khimiko-tekhnologicheskiy institut imeni D.I.Mendeleyeva.

KRESHKOV, A.P.; VASIL'YEV, V.I.

Spectrophotometric titration of nitro derivatives of amines in nonaqueous solvents. Zav. lab. 31 no.1:30-32 '65. (MIRA 18:3)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni Mendeleyeva.



[illegible], A.I.; [illegible], V.A.; [illegible], Z. .

Titration of some derivatives [illegible] in a non-aqueous medium. Zav. lab. 27 [illegible]. (MIRA 13:7)

KRESHKOV, A.P.; YAROVENKO, A.N.; NEVSKAYA, V.N.

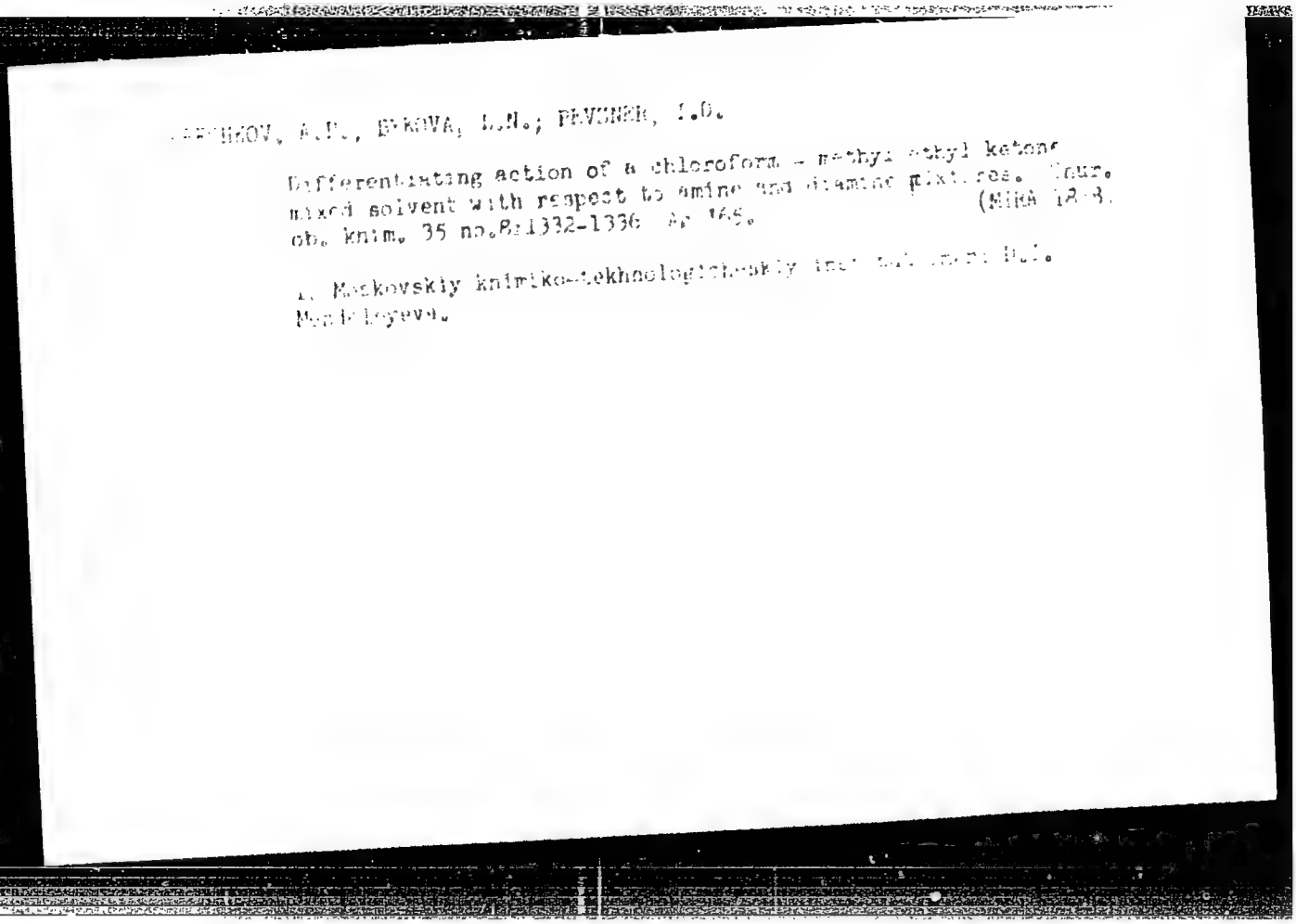
Titration of certain acids by [illegible] in tetraethyl ammonium hydroxide. Zav. lab. 31 [illegible]

[illegible] Moskovskiy khimiko-tekhnologicheskiy institut im. D.I. Mendeleyeva.

KHUDYAKOVA, T.A.; KRESHKOV, A.P.

Chronoconductometric method of determining weak acid salts.
Zav. lab. 31 no. 12:1427-1430 '65 (MIRA 19:1)

1. Gor'kovskiy politekhnicheskiy institut i Moskovskiy khimiko-tekhnologicheskiy institut.



[illegible], A.P., [illegible]; PAVLOVA, L.N.; PAVLOVA, I.G.

Differentiating action of a chloroform - methyl ethyl ketone mixed solvent with respect to amine and diamine mixtures. Trudy ob. knim. 35 no.8:1332-1336 '65. (MIRA 18:8)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni D.I. Mendeleyeva.

KRESHKOV, A.P.; SAYUSHKINA, Ye.N.; DROZDOV, V.A.

Preparation of nonaqueous solutions of hydroxides of quaternary ammonium bases by means of ion exchange. Zhur. prikl. khim. 38 no.11:2398-2401 N '65. (MIRA 18:12)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni D.I. Mendeleyeva. Submitted December 10, 1963.

KRESHKOV, A.P.; YAROVENKO, A.N.; ZELENINA, L.N.

Swelling and absorption properties of ion exchangers in nonaqueous solutions. Plast. massy no.2:57-59 '66.
(MIRA 19:2)

L 13883-66 EWT( )/EWP(1)/T WW/DJ/RM/WE

ACC NR: AP6005518 SOURCE CODE: UR/0080/66/039/001/0200/0203

AUTHOR: Kreshkov, A. P.; Bykova, L. N.; Peyzner, I. D.; Skripko, L. A.

ORG: Moscow Chemical Technology Institute im. D. I. Mendeleyev (Moskovskiy khimiko-tekhnologicheskiy institut); Scientific Research Institute of Chemicals for Polymeric Materials (Nauchno-issledovatel'skiy institut khimikatov dlya polimernykh materialov)

TITLE: Synthesis and analysis of secondary aromatic diamines used as stabilizers of polymeric materials

SOURCE: Zhurnal prikladnoy khimii, v. 39, no.1, 1966, 200-203

TOPIC TAGS: stabilizer additive, fuel additive, lubricant additive, quantitative analysis

ABSTRACT: A preparative method has been developed for synthesizing p-phenylenediamine derivatives from N-phenyl-p-phenylenediamine. It is noted that such derivatives are suitable as stabilizers for polymeric materials, motor fuels, and lubricating oils. N-heptyl-, N-octyl-, and N-nonyl-N'-phenyl-p-phenylenediamine were prepared by alkylation of N-phenyl-p-phenylenediamine with the appropriate alcohol in the presence of Raney nickel catalyst at 130—156C in 95.8—97.8% yields (based on the amine). Melting points after recrystallization were 49—50, 52—53, and 54—55C, respectively. A method of analysis was also developed for intermediate products containing mixtures of N-phenyl-p-phenylenediamine and N-alkyl-N'-phenyl-p-phenylenediamines. The method

Card 1/2 UDC: 547.553.1/.2

L 13883-66

ACC NR: AP6005518

O

involves determination of primary and secondary amino groups of aromatic amines by titration after treatment with salicylaldehyde in a medium such as alcohols, ketones, or a 4/1 chloroform—methyl ethyl ketone mixture. The method is based on the fact that reaction products of primary amino groups with salicylaldehyde are less alkaline than the secondary amino group reaction products. Orig. art. has: 2 figures. [SM]

SUB CODE: 21 SUBM DATE: 18Dec64/ ORIG REF: 004/ OTH REF: 009/ ATD PRESS: 4193

LB

Card 2/2

L 34613-66 EWT(m) DS/RM

ACC NR: AP6026579 SOURCE CODE: UR/0191/66/000/002/0057/0059

AUTHOR: Kreshkov, A. P.; Yarovenko, A. N.; Zelenina, L. N. 33 B

ORG: none

TITLE: Swelling and absorption capacity of ion-exchange resins in nonaqueous media

SOURCE: Plasticheskiye massy, no. 2, 1966, 57-59

TOPIC TAGS: nonaqueous solution, ion exchange resin, methanol, acetone, temperature dependence, cation, anion exchange resin, titrimetry

ABSTRACT: The swelling and exchange capacity of ion-exchange resins (the strongly acidic cation-exchange resin SDV-3 in the H-form and the strongly basic anion-exchange resin AV-17 in the Cl-form) were studied in nonaqueous solvents at various temperatures. The temperature dependence of the swelling of the ion-exchange resins in methanol medium was characterized by a convex curve with a maximum corresponding to 16°C; it depended on many factors, including the individual properties of the resin and solvent. The process of swelling was accompanied by diffusion and adsorption of the solvent, which are influenced oppositely by temperature. The swelling behavior was also studied in acetone. The absorption capacity of the ion-exchange resins was determined under dynamic conditions, retaining a constant rate of flow in the column, uniformly filled with the ion-exchange resin. The temperature dependence of the absorption capacities of the cation and anion-exchange resins

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L 34613-66

ACC NR: AP6026579

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was found to differ; there was also a difference in the dependence of their capacities on the swelling. It was hypothesized that in the case of cation exchange the absorbed solvent in the pores of the swollen ion-exchange resin interferes with the penetration of cations to the active groups, the dynamic exchange capacity therefore increasing with increasing temperature and the swelling decreasing. In the case of anion exchange the molecules of adsorbed solvent promote an increase in the rate of exchange. The exchange capacity of the anion-exchange resin and its swelling reach a maximum at 20°C. The behavior of the cation-exchange resin in nonaqueous media was also studied by potentiometric titration, in which the cation-exchange resin was found to behave as a strong acid, with an exchange capacity of three milligram equivalents per gram. Orig. art. has: 5 figures and 1 table. [JPRS: 36,455]

SUB CODE: 07 / SUBM DATE: none / ORIG REF: 006 / OTH REF: 006

Card 2/2

L 29728-66 EWP(j)/EWT(m) RM/WW

ACC NR: AP6019449 SOURCE CODE: UR/0303/66/000/003/0060/0062

53

B

AUTHOR: Kreshkov, A. P.; Shatunova, T. G.; Myshlyayeva, L. V.; Kuchkarev, Ye. A.

ORG: none

TITLE: Accelerated methods for determining aluminum and silicon in organic compounds containing aluminum and silicon

SOURCE: Lakokrasochnyye materialy i ikh primeneniye, no. 3, 1966, 60-62

TOPIC TAGS: ~~heteroorganic compound, aluminum determination, silicon determination~~ ALUMINUM COMPOUND, SILICON COMPOUND, CHEMICAL DETECTION, TITRIMETRY, SPARK IGNITION

ABSTRACT: Current methods for determining Al and Si in Al- and Si-containing organic compounds (ASOC) require complete mineralization of such compounds and are time-consuming. The authors have developed two accelerated methods for determining these elements in ASOC. The first method is the determination of aluminum by titration involving complex ion formation. The $\geq$Si—O—Al$\leq$ bond is hydrolyzed with a 2N aqueous solution of HCL in acetone or methanol medium. The $\geq$Si—C$\leq$ bond is not affected under these conditions. The organic solvents contribute to the fast hydrolysis by readily dissolving and stabilizing the hydrolysis products. Titration is conducted in aqueous-methanol or aqueous-acetone solutions. The titrant is zinc sulfate; the indicator is Xylenol Orange or dithizone. The second method is spectroscopic for simultaneous determination of aluminum and silicon involving spraying of ASOC cumene solutions into a low-power spark discharge. The two methods were verified with ASOC

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Card 1/2

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ACC NR: AP6019449

of known composition. Both methods give reproducible results which are in general agreement with those of the gravimetric method. Accuracy of the first method is from -1.50 to +0.91%; accuracy of the second method is: for Al, from -2.98 to +3.15%; for Si, from -4.8 to +3.8%. The procedures are described in the source. Orig. art. has: 1 figure and 2 tables. [BO]

SUB CODE: 07/ SUBM DATE: none/ ORIG REF: 008/ ATD PRESS: 5013

Card 2/2

L 31271-66 EWT(1)/EWT(m)/EWP(j) RM/RO SOURCE CODE: UR/0079/66/036/002/0307/0310

ACC NR: AP6022801

AUTHOR: Kreshkov, A. P.; Drozdov, V. A.; Orlova, I. Yu.

ORG: none

TITLE: Synthesis and investigation of certain properties of Bis[trialkyl(aryl)-silyl]monofluorophosphates

SOURCE: Zhurnal obshchey khimii, v. 36, no. 2, 1966, 307-310

TOPIC TAGS: chemical synthesis, organic phosphorus compound, organosilicon compound, hydrolysis, reaction mechanism, condensation reaction, toxicity, cholinesterase, fluorinated organic compound

ABSTRACT: Bis[trialkyl(aryl)silyl]monofluorophosphates with the general formula $(R_3SiO)_2POF$ were synthesized by reaction of trialkyl(aryl)chloro-silanes with the silver salt of monofluorophosphoric acid. Six new organo-silicon monofluorophosphates were produced by the reaction of trimethyl-, triethyl-, dimethylethyl-, dimethylphenyl-, diphenylmethyl-, and dimethyl-p-fluorophenylfluorosilanes. Physical and chemical properties of the products were studied; the fluorophosphates obtained undergo hydrolysis, react with a methanol solution of an alkali metal methoxide at the Si-O bond, and undergo condensation at the Si-O-P and P-F bonds when heated above 200-250° at atmospheric pressure. The toxicity of bis[trialkyl(aryl)silyl]monofluoro-phosphates was found to be far lower than the toxicity of their organic analogs; the compounds exhibit practically no anticholinesterase activity. Orig. art. has: 2 figures and 1 table. [JPRS]

SUB CODE: 07, 06 / SUBM DATE: 020ct64 / ORIG REF: 007 / OTH REF: 005

UDC: 546.185 + 547.245: 542.951.3

Card 1/1

L 21529-66 EWT(m)/EWP(1)/T WW/RM

ACC NR: AP6009157 SOURCE CODE: UR/0079/66/036/003/0525/0528

AUTHOR: Kreshkov, A. P.; Drozdov, V. A.; Orlova, I. Yu.

ORG: none

TITLE: Synthesis and investigation of some properties of trialkyl- and triarylsilyl difluorophosphates

SOURCE: Zhurnal obshchey khimii, v. 36, no. 3, 1966, 525-528

TOPIC TAGS: silane, organophosphorus compound, fluorophosphate ester, silyl ester

ABSTRACT: Ammonium difluorophosphate reacts with trialkyl- or triarylsilyl chlorides in absolute ether to form trialkyl- or triarylsilyl difluorophosphates:

$$R_3R'SiCl + NH_4OPOF_2 \longrightarrow \underset{(I-VII)}{R_3R'SiOP(F_2)O} + NH_4Cl$$

(I) $R = R' = CH_3$; (II) $R = R' = C_2H_5$; (III) $R = CH_3$, $R' = C_6H_5$; (IV) $R = C_2H_5$, $R' = C_6H_5$; (V) $R = CH_3$, $R' = C_6H_5$; (VI) $R = C_2H_5$, $R' = CH_3$; (VII) $R = CH_3$, $R' = n\text{-}C_6H_4F$.

The products are colorless, transparent liquids with a sharp odor, which tend to fume in air. They are easily soluble in polar and nonpolar solvents. It was shown that the products decompose partially on heating, probably in the following manner:

$$3(C_2H_5)_3SiOPOF_2 \longrightarrow 3(C_2H_5)_3SiF + POF_3 + P_2O_5$$

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L 21529-66
ACC NR: AP6009157 O

Triethylfluorosilane and phosphorus pentoxide were identified among the decomposition products. The bond strength of the ester function was checked by potentiometric titration in methanol. Orig. art. has: 2 figures and 1 table. [VS]

SUB CODE: 07 SUBM DATE: 17Feb65/ ORIG REF: 006/ OTH REF: 006/ ATD PRESS: 4218

Card 2/2 dlo

L 39751-66 EWT(m)/EWP(j) RM/AW/GD-2
ACC NR: AP6015922 SOURCE CODE: UR/0286/65/000/015/0031/0031

INVENTOR: Kreshkov, A. P.; Drozdov, V. A.; Orlova, I. Yu.

ORG: Moscow Chemico-Technological Institute im. D. I. Mendeleyev (Moskovskiy khimiko-tekhnologicheskiy institut)

TITLE: Method for obtaining trialkyldifluorophosphatesilanes--Certificate No. 173228, Class C 07f

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 15, 1965, 31

TOPIC TAGS: silane, organic phosphorus compound, phosphate, halogenated organic compound

ABSTRACT: The method for obtaining trialkyldifluoro phosphatesilanes, for example trimethyl-, triethyl-, dimethylethyl-, diethylpropyldifluoro- phosphatesilanes, distinguished by the fact that trialkylchlorosilanes are subjected to reaction with ammonium difluorophosphate in an organic solvent with heating. The method according to paragraph 1, distinguished by the fact that the reaction mixture i heated to boiling. [JPRS]

SUB CODE: 06 / SUBM DATE: 13Apr63

Card 1/1 UDC: 661.718.1'15:547.412:26'241'245

ACC NR: AP6021968 SOURCE CODE: UR/0153/66/009/002/0200/0204

AUTHOR: Kreshkov, A. P.; Drozdov, V. A.; Kolchina, N. A.

37
13

ORG: Moscow Chemical Technology Institute im. D. I. Mendeleyev (Moskovskiy khimiko-tekhnologicheskiy institut)

TITLE: Determination of alkyl phosphonic and phosphonothioic dichlorides, dialkyl-phosphinic and phosphinothioic chlorides

SOURCE: IVUZ. Khimiya i khimicheskaya tekhnologiya, v. 9, no. 2, 1966, 200-204

TOPIC TAGS: analytic chemistry, volumetric analysis, potentiometric titration, organic phosphorus compound, organic sulfur compound, organophosphorus compound

ABSTRACT: A titrimetric method has been developed for quantitative determination of alkyl-phosphonic and phosphonothioic dichlorides, dialkyl-phosphinic and phosphinothioic chlorides, of methylphosphonic acid and free hydrochloric acid in the above-listed chlorides. The method was based on the reactions of these chlorides or methylphosphonic acid with a measured excess of an amine (piperidine or cyclohexylamine) in an organic solvent. Back-titration, potentiometric or visual, of the excess amine with 0.1 N HCl determined the quantity of all the organophosphorus or S-containing organophosphorus chlorides studied and of methylphosphonic acid. The relative error of all determinations with piperidine did not exceed -2.4%. Direct potentio-

Card 1/2 UDC: 543.257

ACC NR: AP6021968

metric titration of the free HCl impurity with triethylamine in a mixed organic solvent was successfully applied only to S-containing organophosphorus chlorides. [JK]
Orig. art. has: 2 figures, 3 tables, and 2 formulas.

SUB CODE: 07/ SUBM DATE: 22Jun64/ ORIG REF: 003/ OTH REF: 011

Card 2/2

L 38118-66 EWT(m)/EWP(j)/EWP(t)/ETI IJP(c) JD/RM

ACC NR: AP6014141 (A) SOURCE CODE: UR/0075/65/020/012/1325/1329

AUTHOR: Kreshkov, A. P.; Myshlyayeva, L. V.; Kuchkarev, Ye. A.; Shatunova, T. G.

ORG: Moscow Chemico-technological Institute im. D. I. Mendeleyev (Moscovskiy khimiko-tekhnologicheskiy institut)

TITLE: Quantitative determination of titanium in titanium-organic and titanium-silicon-organic compounds

SOURCE: Zhurnal analiticheskoy khimii, v. 20, no. 12, 1965, 1325-1329

TOPIC TAGS: quantitative analysis, titanium, titanium compound, silicon compound

ABSTRACT: The article describes two methods for the determination of titanium, a titration (complexometric) and a spectroscopic method. In the titration method, a weighed portion of the compound to be analyzed, containing 10-15 mg of titanium, is introduced into 5-7 ml of concentrated sulfuric acid. The mixture is heated for 10-15 minutes up to the evolution of H_2SO_4 vapors. The solution is cooled to 90-100° and complete mineralization of the weighed portion is carried out with ammonium persulfate. The solution is cooled and 30 ml of water are

UDC: 543.70:543.80

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L 38118-66

ACC NR: AP6014141

carefully added and the solution is boiled for 5-10 min to decompose the ammonium persulfate. The silicic acid is filtered off and the silicon is determined by weighing in the form of SiO_2. Final titration of the titanium in the filtrate is done with a 0.05 M solution of $ZnSO_4$. The relative error of the method does not exceed 2.5%. In the spectroscopic method, the titanium is determined in the form of tetrabutoxytitanium and silicon in the form of tetraoxysilane. In this method, the standard relative error in the determination is 2.2% for titanium and 4% for silicon. Comparative results by the two methods are shown in tabular form. According to the article, the spectroscopic method is to be preferred in practice, since no preliminary mineralization is required. Orig. art. has: 2 figures and 2 tables.

SUB CODE: 07/ SUBM DATE: 28Nov64/ ORIG REF: 010/ OTH REF: 002

Card 2/2

L 36079-66 EWT(m)/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AP6016298 (A) SOURCE CODE: UR/0075/66/021/001/0034/0039

AUTHOR: Kreshkov, A. P.; Yarovenko, A. N.; Milayev, S. M.; Aldarova, N. Sh.

ORG: Moscow Chemico-technological Institute im. D. I. Mendeleyev (Moscovskiy khimiko-tekhnologicheskiy institut); Eastern Siberian Technological Institute, Ulan-Ude (Vostochno-Sibirskiy tekhnologicheskiy institut)

TITLE: Analysis for salts of rare earth elements in nonaqueous solutions

SOURCE: Zhurnal analiticheskoy khimii, v. 21, no. 1, 1966, 34-39

TOPIC TAGS: quantitative analysis, rare earth element, nonaqueous solution

ABSTRACT: The article describes the results of a study of the behavior of the rare earth elements in alcohols, ketones, and in a mixture of methanol and acetone. Nitrates of the rare earth elements in a methanol-acetone medium (1:4) act as acids and can therefore be determined by direct potentiometric titration with a standard benzene-methanol solution of tetraethylammonium hydroxide or with a methanol solution of tetramethylammonium hydroxide. The following rare earths

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ACC NR: AP6016298

were determined: Y, La, Ce(III), Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Yb, Lu, and Th. A figure gives the titration curves for individual rare earth nitrates, and a second figure gives the titration curves for mixtures of rare earth nitrates and for mixtures of nitrates with nitric acid. Further figures give analogous curves for the the nitrates of various elements and for mixtures of rare earth nitrates with the nitrates of other elements. The actual analytical results of the determinations are shown in tabular form. Orig. art. has: 4 figures and 3 tables.

SUB CODE: 07/ SUBM DATE: 06May65/ ORIG REF: 004/ OTH REF: 013

ACC NR: AP6024289 SOURCE CODE: UR/0075/66/021/007/0813/0816

AUTHOR: Kreshkov, A. P.; Yarovenko, A. N.; Milayev, S. M.

ORG: Moscow Chemical Engineering Institute im. D. I. Mendeleyev (Moskovskiy khimiko-tekhnologicheskiy institut)

TITLE: Analysis of magnesium-rare earth element alloys in nonaqueous solutions

SOURCE: Zhurnal analiticheskoy khimii, v. 21, no. 7, 1966, 813-816

TOPIC TAGS: magnesium alloy, rare earth element, nonaqueous solution, titrimetry, bromide

ABSTRACT: The behavior of chlorides, bromides, and nitrates of Sc, Y, La, Ce, Pr, Nd, Sm, Eu, Gd, Yb, Dy, Ho, Er, Tm, and Lu in nonaqueous solvents was studied, and it was found that bromides in mixed methanol-acetone solvent can be determined separately by direct potentiometric titration with a standard benzene-methanol solution of tetraethylammonium hydroxide. On the basis of earlier determined properties of mineral acids and their salts in nonaqueous solutions, new and rapid methods have been developed for analyzing binary and ternary Mg, Mn, Cd, Co, Ni, Zn, Al, Pb, and other metal base alloys with rare earths. A procedure for analyzing magnesium alloys with the rare earths enumerated above is described. It consists of a consecutive potentiometric titration of rare earth and magnesium bromides in a 1:4 methanol-acetone solvent. It is rapid and reasonably accurate and can be applied to the analysis of certain ternary magnesium alloys. Orig. art. has: 2 figures and 2 tables. [27]

SUB CODE: 07/ SUBM DATE: 23Jul65/ ORIG REF: 007/ OTH REF: 001/ ATD PRESS: 5055

Card 1/1 UDC: 543.70

L 36925-66 EWT(m)/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AP6012212 SOURCE CODE: UR/0032/66/032/004/0396/0397

AUTHOR: Kreshkov, A. P.; Yarovenko, A. N.; Milayev, S. M.

ORG: Moscow Chemico-technological Institute im. D. I. Mendeleyev (Moskovskiy khimiko-tekhnologicheskiy institut)

TITLE: Analysis of alloys of the rare earth elements in nonaqueous solutions

SOURCE: Zavodskaya laboratoriya, v. 32, no. 4, 1966, 396-397

TOPIC TAGS: quantitative analysis, rare earth element, nonaqueous solution

ABSTRACT: The article reports a fast approximate method of analysis of alloys of the rare earth elements, based on dissolving them in hydrobromic acid and subsequent titration of the compounds obtained in a methanol-acetone medium, with a standard benzene-methanol solution of tetraethylammonium hydroxide. The method has been applied to the analysis of binary and ternary alloys of the rare earth metals based on magnesium, manganese, cadmium, cobalt, nickel, zinc, aluminum, lead, and other metals. The titration was carried out by the potentiometric method. Measurement of the potentials was done with a type LP-58

Card 1/2 UDC: 543.7

L 36925-66

ACC NR: AP6012212

potentionmeter. Experimental results are given in two tables. Orig. art. has: 2 figures and 2 tables.

SUB CODE: 07/ SUBM DATE: none.

Card 2/2

L 36791-66 EWP(j)/EWT(m)/EWP(t)/ETI IJP(c) RM/JD
ACC NR: AP6015726 (A) SOURCE CODE: UR/0032/66/032/005/0558/0559

61
58
B

AUTHOR: Kreshkov, A. P.; Kucharev, Ye. A.

ORG: Moscow Chemico-technological Institute im. D. I. Mendeleyev (Moskovskiy khimiko-tekhnologicheskiy institut)

TITLE: Spectroscopic method of determining germanium, tin, and lead in organometallic compounds

SOURCE: Zavodskaya laboratoriya, v. 32, no. 5, 1966, 558-559

TOPIC TAGS: spectrographic analysis, germanium, tin, lead, organometallic compound

ABSTRACT: The article proposes a new method which does not require preliminary mineralization of the substance to be analyzed. The method is based on the spectrophotographic analysis of solutions of the organometallic compounds in i-propylbenzene which are introduced into the condensed spark from a cup-shaped fulgurator cooled with a frozen mixture of ethylene glycol and water (1:1). The content of the element to be determined in the solution is found from curves, and its content in the substance being analyzed is then calculated by standard methods. A table shows the results of spectroscopic analysis of eleven different

Card 1/2 UDC: 543.42

L 36791-66

ACC NR: AP6015726

organic compounds of germanium, tin, and lead. The mean square error in the spectroscopic determination of germanium is 2.8%, of tin 2.7%, and of lead 3.3%. Orig. art. has: 2 figures and 1 tables.

SUB CODE: 07, 20/ SUBM DATE: none/ ORIG REF: 003/ OTH REF: 001

Card 2/2 af

KRESHKOV, I. P. Cand. Physicomath Sci.

Dissertation: "Theory of Motion of the Fifth Jupiter's Satellite."

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Moscow State U. imeni
M. V. Lomonosov.

SO Vecheryaya Moskva
Sum 71

KRESHKOV, A.P., prof.; KRESHKOVA, Ye.K., assistent

Anhydrous solutions. Khim. v shkole 17 no.3:3-10 My-Je '62.
(MIRA 15:6)
(Solution (Chemistry))

PLATONOV, V.M.; KRESHTAKOVA, G.P.

Calorizing automobile engine valves. Metalloved. i term. obr. met. no.5:61-63 My '63. (MIRA 16:5)

1. Nauchno-issledovatel'skiy institut tekhnologii mashinostroyeniya Chelyabinskogo soveta narodnogo khozyaystva.
(Automobiles—Engines—Valves) (Aluminum coating)

ACC NR: AP7000317 SOURCE CODE: UR/0413/66/000/022/0052/0052

AUTHOR: Kareyev, M. F.; Plakhov, A. N.; Zheglov, V. A.; Kreshtapov, Ye. Ya.

ORG: None

TITLE: A device for automatically controlling the rate of motion of the plunger on a horizontal hydraulic press. Class 21, No. 188543 [announced by the All-Union Scientific Research and Design and Planning Institute of Metallurgical Machine Building (Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-konstruktorskiy institut metallurgicheskogo mashinostroyeniya)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 22, 1966, 52

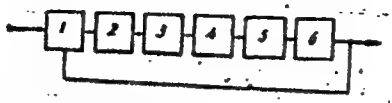
TOPIC TAGS: metal press, automatic control equipment, electronic equipment

ABSTRACT: This Author's Certificate introduces a device for automatically controlling the rate of motion of the plunger on a horizontal press. The unit contains an amplifier and a DC-AC inverter. The installation is designed to handle a wide range of velocities, to improve efficiency at low velocity and to eliminate the zone of insensitivity and slow response. A master signal and a feedback signal are sent to the inputs of a discrete-analog comparator in the regulator, while the output of this comparator is connected through the inverter to a VFO which is connected through a

Card 1/2 UDC: 621.3.078.4-531.6:621.979-82

ACC NR: AP7000317

rectifier unit to the actuating step-by-step motor.



1—discrete-analog comparator; 2—inverter; 3—amplifier; 4—VFO; 5—rectifier unit; 6—step-by-step motor

SUB CODE: 13, 09/ SUBM DATE: 28May64

Card 2/2

KRASNOV, V.K.

Hydrogeology of the peat fields of the Vasukhen [illegible].
Trudy Kal. torf. inst. no.13:[illegible] '63.
(MIRA 17:12)

SOKOLOVA, S.M.; STAROSTIN, B.A.; SHATALINA, M.S.; KRESHTAPOVA, V.N.; SKVORTSOV, A.K.; GOLYSHEVA, M.D.; DUNDIN, Yu.K.; PODL[illegible]SKIY, G.I.; SHKODA, A.M.; DONSKAYA, T.N.; MURTAZANOVA, E.Sh.; LOBACHEV, V.S.; VORNOV, A.G.; SKOKOVA, N.N.

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(MIRA 18:12)

KRESIAN, M.G.

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Greasing press molds for pressure casting. Lit.proizv. no.9:29 D'54. (MLRA 8:2)
(Die casting)

KRESIC, L.
L. KRESIC

"The importance of transportation costs in determining industrial location." p. 214
(EKONOMSKI PREGLED. Vol. 3, no. 12, Dec. 1952, Zagreb, Yugoslavia)

SO: Monthly List of East European Accessions, L. C. Vol. 2 , No. 7, July 1953, Uncl.

Antić, I.

"Some problems in connection with increasing investments." p. 71. (Gradevinar. Vol. 5, no. 2, May 1953. Zagreb.)

SO: Monthly List of East European Accessions. Vol. 3, no. 3. Library of Congress. March 1954. Uncl.

KRESIC, Miljenko, Inz. (Zagreb)

Effect of high-voltage electric wires and atmospheric discharges on the telecommunication cables. Energija Hrv 12 no. 9/10:283-285 '63.

1. Zajednica elektroprivrednikh poduzeca Hrvatske, Zagreb, Proleterskih brigada 37.

KRESIC, Miljenko, [illegible].

Bimetallic measuring instruments. Energija Hrv 12 no.7/8: 253-254'63.

KRESIKOVA, I.A.

Interrelations of rheumatic fever and tuberculosis. Pediatriia 37 no.4:49-52 Ap '59. (MIRA 12:6)

1. Iz revmatologicheskogo kabineta detskoy poliklinik No.2 Sochi (glavnyy vrach M.I.Akmayeva).
(RHEUMATIC FEVER, in inf. & child
relation to tuberc. infect. (Rus))
(TUBERCULOSIS, in inf. & child
relation to rheum. fever infect. (Rus))

KRESIKOVA, I.A.

Familial rheumatic fever. Vop. okh. mat. i det. 5 no.6:86 N-D '60.
(MIRA 13:12)

1. Iz antirevmatologicheskogo kabineta detskoy poliklinik No.2, Sochi.
(RHEUMATIC FEVER)

GRIGOR'YEV, I.I.; SHIKHOVA, N.M.; VLADIMIROVA, Z.Ya.; KRESIKOVA, I.A.; PATRUSHEVA, A.V.

Prevention of rheumatic fever under operating conditions of rheumatological clinics. Vrach. delo no.9:31-33 S '60. (MIRA 13:9)

1. Sochinskiy nauchno-issledovatel'skiy institut kurortologii.
(RHEUMATIC FEVER)

KRESIKOVA, I.A.

"Electrocardiograms of children in normal and certain pathological states" by M.N.Petrenko, R.IA.Pis'mennyi. Reviewed by I.A.Kresikova. Sov.med. 25 no.4:155-156 Ap '61. (MIRA 14:6)
(ELECTROCARDIOGRAPHY) (PETRENKO, M.N.) (PIS'MENNYI, R.IA.)

KRESHKOV, Anatoliy P[avlovich]. [illegible] YAMPOLENKO, A.N., dots.; KRESHKOVA, Ye.K., [illegible], VILENSKIY, D.S., kand. khim. nauk, dots.; MIKHAYLENKO, [illegible]; OSTROVSKAYA, N.I., red.; ODERBERG, L.K., red.

[Principles of analytical chemistry, qualitative and quantitative analysis in two books] Osnovy analiticheskoi khimii; kachestvennyi i kolichestvennyi analiz [v dvukh knigakh]. Izd.2., perer. Moskva, Khimiia. 2 vol. (MIRA 18:12)

PAVLENKO, Yevgeniy Yakovlevich; KRESIN, M.L., red.; BODANOVA, A.P., tekhn. red.

[Automotive transportation; problems and exercises]Avtomobil'nye perevozki; sbornik zadach i uprazhnenii. Moskva, Avtotransizdat, 1962. 184 p. (MIRA 16:2)
(Transportation, Automotive--Study and teaching)

YERETSKIY, Mark Isaakovich; KRESIN, Mark Leont'yevich; MATVEYEV, M.I., retsenzent; AFANAS'YEV, L.L., kand. tekhn. nauk, red.; GALAKTIONOVA, Ye.N., tekhn. red.

[Methodology of degree projects]Metodika diplomnogo proektirovaniia. Moskva, Nauchno-tekhn. izd-vo M-va avtomobil'nogo transp. i shosseinykh dorog RSFSR, 1961. 206 p. (MIRA 14:11)
(Project method in teaching) (Technical education)

83709
S/056/60/039/004/002/048
B019/B070

24.6720

AUTHORS: Iodko, M. G., Tuchkevich, V. V., Romanov, V. A., Kresin, O.M.

TITLE: An Investigation of the Relative Intensities of Some Conversion Lines in the Spectrum of Neutron-deficient Lu-Isotopes

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 38, No. 4, pp. 1027-1030

TEXT: The authors have investigated the strong lines of the conversion spectrum of the neutron deficient Lu-isotopes by means of a prism spectrometer. The two sources used here were obtained by separating the Lu-isotope fraction from a Ta-target which had been irradiated by 660-Mev protons. With the first source, the energies and the intensities of the conversion lines 66.70 and 75.85 kev in the Lu^{171} spectrum were measured, and 78.70 and 90.55 kev lines in the spectrum of Lu^{172}. The relative intensities of the 84.19-kev L-lines in the Lu^{170}-spectrum, the 87.30-kev L-lines in the Lu^{169}-spectrum, and the 181.4 kev L-lines in the Lu^{172}-

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An Investigation of the Relative Intensities of Some Conversion Lines in the Spectrum of Neutron-deficient Lu-Isotopes

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spectrum were measured with the second source. As the second source was very thick, the data obtained with it are to be considered only as rough values. The energies of the lines were measured by a method developed earlier by Romanov (Ref. 4). The energies of the conversion lines, and the calculated values of the transition energies are given in Table 1. The conversion lines are represented graphically in Fig. 1. The ratios of the L-conversion lines of the transitions with 66.74 and 75.89 kev in the Lu^{171}-spectrum are given in Table 2. The analogous ratios for 78.74 kev-, 90.66 kev-, and 181.4 kev in the Lu^{172}-spectrum are given in Table 3. The theoretical and the experimental values are compared in the tables 2 and 3, and the multiplicities of γ-transitions are derived from the corresponding L-sub-shell intensities. L. A. Sliv and I. M. Band (Ref.10) are mentioned. There are 1 figure, 3 tables, and 16 references: 6 Soviet, 8 US, and 2 Dutch.

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An Investigation of the Relative Intensities of Some Conversion Lines in the Spectrum of Neutron-deficient Lu-Isotopes S/056/60/038/004/002/048 B019/B070

ASSOCIATION: Leningradskiy fiziko-tekhnicheskiy institut Akademii nauk SSSR (Leningrad Institute of Physics and Technology of the Academy of Sciences, USSR)

SUBMITTED: August 7, 1959

X

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21943
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B104/B138

24.2500

AUTHORS: Ankudinov, V. A., Kel'man, V. M., Kresin, O. M., and Sysoyeva, L. N.

TITLE: Motion of charged particles in a uniform magnetic field the strength of which is linearly dependent on time

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 32, no. 1, 1962, 22-29

TEXT: The motion of charged particles of mass m and charge e was studied in a uniform magnetic field $H_z = H_0 t + H_1$. H_0 and H_1 are constant. The electric field created by the variation in magnetic field strength is shown as $E\varphi = -H_0 r/2c$. The equations of motion for a charged particle in nonrelativistic approximation read:

$$m(\ddot{r} - r\dot{\varphi}^2) = \frac{e}{c} r\dot{\varphi}(H_0 t + H_1), \quad \frac{m}{r}\frac{d}{dt}(r^2\dot{\varphi}) = -\frac{eH_0 r}{2c} - \frac{e}{c}\dot{r}(H_0 t + H_1), \quad m\ddot{z} = 0.$$

From the latter equation it follows that $z = \dot{z}_0 t + z_0$ (3), where $\dot{z}_0$ and z_0 are constant. Thus, the particles travel in an r-φ plane moving along the z-axis at constant velocity. By substituting

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Motion of charged particles ...

$$\omega_0 = \frac{eH_0}{2mc}, \quad \omega_1 = \frac{eH_1}{2mc}, \qquad (A)$$

in the equations of motion, one obtains

$$\ddot{r} - r\dot{\varphi}^2 = 2r\dot{\varphi}(\omega_0 t + \omega_1),$$
$$\frac{d}{dt}(r^2\dot{\varphi}) = -\omega_0 r^2 - 2rt(\omega_0 t + \omega_1). \qquad (4)\text{-}(5).$$

Using the complex function $U = r\exp\left\{i(\varphi + \omega_0 t^2/2 + \omega_1 t)\right\}$, this system can be represented in the form $\ddot{U} + (\omega_0 t + \omega_1)^2 U = 0$ (7).

$$U = \sqrt{t + \frac{\omega_1}{\omega_0}}\left\{C_1 J_{1/4}\left[\frac{(\omega_0 t + \omega_1)^2}{2\omega_0}\right] + C_2 J_{-1/4}\left[\frac{(\omega_0 t + \omega_1)^2}{2\omega_0}\right]\right\}. \qquad (8)$$

is a solution of (7), J_n being the Bessel function. The constants in (8) are determined with the aid of an initial value problem, and

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Motion of charged particles ...

$$U=\frac{\pi}{2}\sqrt[4]{\frac{x_0x}{\omega_0^2}}\{\omega_1 r_0[J_{1/4}(x_0)J_{1/4}(x)+J_{-1/4}(x_0)J_{-1/4}(x)]+$$
$$+[\dot r_0+ir_0(\dot\varphi_0+\omega_1)][J_{-1/4}(x_0)J_{1/4}(x)-J_{1/4}(x_0)J_{-1/4}(x)]\},\qquad(13)$$

$$x=\frac{(\omega_0 t+\omega_1)^2}{2\omega_0},\ \text{a}\ x_0=\frac{\omega_1^2}{2\omega_0}.$$

is obtained as solution. Since r is the amount of the complex function U, one has

$$r=\sqrt{UU^*}=\frac{\pi}{2}\sqrt[4]{\frac{x_0x}{\omega_0^2}}\{r_0^2(\dot\varphi_0+\omega_1)^2[J_{-1/4}(x_0)J_{1/4}(x)-J_{1/4}(x_0)J_{-1/4}(x)]^2+$$
$$+[\omega_1 r_0(J_{1/4}(x_0)J_{1/4}(x)+J_{-1/4}(x_0)J_{-1/4}(x))+\dot r_0(J_{-1/4}(x_0)J_{1/4}(x)-$$
$$-J_{1/4}(x_0)J_{-1/4}(x))]^2\}^{1/2}\qquad(14)$$

(14)-(15).

$$\varphi=x_0-x+\operatorname{arc\,tg}\frac{r_0(\dot\varphi_0+\omega_1)}{\dot r_0\dfrac{J_{1/4}(x_0)J_{1/4}(x)+J_{-1/4}(x_0)J_{-1/4}(x)}{J_{-1/4}(x_0)J_{1/4}(x)-J_{1/4}(x_0)J_{-1/4}(x)}+\omega_1 r_0}.\qquad(15)$$

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Motion of charged particles ...

(3), (14), and (15) fully describe the motion of a charged particle in the given magnetic field. A thorough study shows that if a particle moves long enough its kinetic energy is almost linearly time-dependent. The results are applied to a number of special cases. There are 9 figures and 2 non-Soviet references. The two references to English-language publications read as follows: Gordon, Charged-Particle Orbits in Varying Magnetic Fields, J. of Appl. Phys., 31, no. 7, 1187 (1960); C. S. Gardner, Particle trajectories in homogeneous magnetic field with linear time dependence, University of California, Lawrence Radiation Laboratory, Berkeley, California, Rept. 4563 (Aug. 1955).

ASSOCIATION: Fiziko-tekhnicheskiy institut AN SSSR im. A. F. Ioffe, g. Leningrad (Physicotechnical Institute AS USSR imeni A. F. Ioffe, Leningrad)

SUBMITTED: March 27, 1961

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2-58-5-5/17

AUTHOR: Kresin, R., Dotsent of the Chair of Industrial Statistics

TITLE: On the Relations Between Salary Funds and Gross Production (O svyazi mezhdu fondom zarabotnoy platy i valovoy produktsiyey)

PERIODICAL: Vestnik Statistiki, 1958, Nr 5, pp 31 - 35 (USSR)

ABSTRACT: The author presents a new method of calculating salary funds (proportionally to the labor input used in production) and builds up a new index to correct salary funds according to actual requirements. Theoretical calculation principles are expounded and demonstrated by examples. There are 2 tables.

ASSOCIATION: Bukharestskiy neftyanoy institut (The Bucharest Petroleum Institute)

AVAILABLE: Library of Congress

Card 1/1

30(5) SOV/2-59-5-3/10

AUTHOR: Kresin, R. (Rumania)

TITLE: Analysis of Labor Efficiency by Means of Indices

PERIODICAL: Vestnik statistiki, 1959, Nr 5, pp 40-44 (USSR)

AUTHOR: The author (from Rumania) states that statistical indices enable registering increased labor efficiency, resulting from technical improvements, higher labor qualifications and better working organization. Labor efficiency is calculated from the amount of production divided by working time and is represented by a formula $q = \frac{Q}{T}$, where q is labor efficiency; Q is the amount of material produced and T is working time used in this production. This formula, applied in various areas, industries or factories of the same industry, will give different results, symptomatic of different factors affecting labor efficieny in small areas or industrial units. But the formula

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Analysis of Labor Efficiency by Means of Indices

can also be applied to larger areas and groups of industries, in which case it will indicate an average labor efficiency in a given area or group of industries. The formula itself, according to the author, can be differently represented, but it should always give similar results. There are 2 tables.

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24(3)

AUTHORS: Geylikman, B. T., Kresin, V. Z. SOV/20-123-2-13/50

TITLE: On the Phononic Thermal Conductivity of Superconductors (O fononnoy teploprovodnosti sverkhprovodnikov)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 2, pp 259-261 (USSR)

ABSTRACT: Several mechanisms of thermal conduction are known to exist which are connected with the interaction of electrons, phonons, and the atoms of the impurity. In superconductors the thermal conduction of the lattice plays an important part. In a previous paper by B. T. Geylikman the electronic thermal conduction connected with the distance between electrons in the impurities was calculated. In the present paper the thermal conductivity due to the action of electrons on phonons is determined. There exists also a temperature range in which this mechanism is one of the most important ($T \lesssim (0.3\text{-}0.5)T_k$). First, the kinetic equation for the distribution functions of phonons is written down. In the Hamiltonian of electron-phonon interaction one passes over to new Fermi amplitudes by means of a transformation. Next, a formula for the collision integral is given on the basis of these new amplitudes, and also the

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On the Phononic Thermal Conductivity of Superconductors SOV/20-123-2-13/50

distribution function is written down. The calculation process is outlined. The expression obtained for the thermal heat flow of the lattice is given. The formulae found give a good description of the experimental results obtained by R. J. Sladek (Ref 5). There are 5 references, 3 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy pedagogicheskiy institut im. V. I. Lenina (Moscow State Pedagogical Institute imeni V. I. Lenin)

PRESENTED: July 12, 1958, by L. A. Artsimovich, Academician

SUBMITTED: July 10, 1958

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KRESIN, V.Z., Cand Phys Math Sci ** (diss) "Transport phenomena and paramagnetism in superconductors." Vos, 1959, 7 pp (Vos State Pedagogical Inst im V.I. Lenin) 150 copies (KL, 30-59, 111)

KRESIN, V. Z.

24(0) SOV/30-59-2-42/60

AUTHOR: Khalatnikov, I. M., Doctor of Physical and Mathematical Sciences

TITLE: Investigations of Low-temperature Physics (Issledovaniya po fizike nizkikh temperatur)

PERIODICAL: Vestnik Akademii nauk SSSR, 1959, Nr 2, pp 98-100 (USSR)

ABSTRACT: The 5th All-Union Conference on this problem took place in Tbilisi from October 27 to November 1, 1958. It was attended by physicists from Moscow, Khar'kov, Leningrad, Tbilisi, Sverdlovsk, and Kiyev. 4 fields of low-temperature physics were discussed: superliquidity of liquid helium II, supraconductivity, antiferromagnetism, magneto-resistive effect. The following reports and communications were heard: A. A. Abrikosov, L. P. Gor'kov reported on the investigation of the properties of supraconductive alloys. A. A. Abrikosov, L. P. Gor'kov, I. M. Khalatnikov spoke of properties of supraconductors in the high-frequency magnetic field. D. V. Shirkov and Chen' Chun'-yan' and Chzhou Si-shin', two young Chinese scientists working at Moscow University, described investigations for determination of the influence exercised by the Coulomb (Kulon) interaction of charges on supraconductivity. V. V. Tolmachev explained the

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nature of the so-called collective excitations of the Bose type in supraconductors. D. N. Zubarev, Yu. A. Tserkovnikov spoke of the thermodynamics of supraconductors and B. T. Geylikman, V. Z. Kresin of the thermal conduction of supraconductors. Yu. V. Sharvin, V. P. Gantmakher reported on experimental work with supraconductors. N. V. Zavaritskiy spoke of the measurement of the anisotropy of thermal conductivity in the supraconductive state. In a series of reports problems of the superliquidity of helium were discussed, which was discovered in 1938 by P. L. Kapitsa and the theory of which was set up in 1941 by L. D. Landau. E. L. Andronikashvili and his collaborators investigated the properties of rotating helium. V. P. Peshkov spoke of the effect of the formation of the boundary between superliquid and non superliquid helium. Guan Vey-yan', collaborator of the Institut fizicheskikh problem (Institute of Physical Problems) investigated the properties of the so-called jump in temperature of Kapitsa. I. M. Lifshits, V. G. Peschanskiy investigated galvanomagnetic phenomena in strong magnetic fields for metals with open Fermi surfaces. N. Ye. Alekseyevskiy, Yu. P. Gaydukov experimentally investigated the resistance anisotropy of gold monocrystals in the

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magnetic field. L. S. Kan, B. G. Lazarev combine the presence of a temperature minimum with the structural state of the metal. M. Ya. Azbel' reported on the quantum theory of metallic conductivity in the alternating electromagnetic and constant magnetic field. A. S. Borovik-Romanov reported on the weak ferromagnetism in antiferromagnetic samples of $MnCO_3$. N. N. Kreynes, Ye. A. Turov investigated the magnetic anisotropy of the antiferromagnetic monocrystals $CuSO_4$ and $CoSO_4$. A. I. Alikhanov reported on neutronographic investigations of antiferromagnetics. Ya. I. Kanlarskiy and collaborators reported on the susceptibility of nickel and nickel-copper alloys at low temperatures. M. I. Kaganov, V. M. Tsukernik reported on kinetic phenomena in ferromagnetics at low temperatures. A. I. Akhiyezer, V. G. Bar'yakhtar, and S. P. Peletminskiy spoke of computations of the relaxation of the magnetic moment in ferromagnetic dielectrics at low temperatures. T. I. Sanadze spoke of observation results of paramagnetic resonance of terbium in the $TbNO_3 \cdot 6H_2O$ nitrate. G. R. Khutsishvili gave a theoretical analysis of the orientation of the nuclear spin in the Overhauser (Overkhauser) effect in nonmetals. B. N. Samoylov, S. M. Reynov and collaborators reported on obtaining orientated nuclei. R. F. Bulatova, V. S. Kogan and B. G. Lazarev showed that hydrogen isotopes in solid state have different structures. I. A. Gindin, B. G. Lazarev, Kh. D. Starodubov and V. I. Khotkevich detected polymorphism in a number of metals at low temperatures. E. L. Andronikashvili, V. P. Peshkov and M. P. Malkov reported on the stage of development of foreign scientific research work in the field of low-temperature physics. At the end of the Conference P. L. Kapitsa spoke of his successful development of investigations in the field of low-temperature physics. The participants of the Conference visited the Institut fiziki Akademii nauk Gruzinskoy SSR (Physics Institute of the Academy of Sciences of the Gruzinskaya SSR) and the Physics Faculty of Tbilisi University as well as the building of the new research atomic reactor near Tbilisi.

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24(1) SOV/56-36-3-66/71

AUTHORS: Geylikman, B. T., Kresin, V. Z.

TITLE: On the Thermal Conductivity and Sound Absorption in Superconductors (O teploprovodnosti i pogloshchenii zvuka v sverkhprovodnikakh)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 36, Nr 3, pp 959 - 961 (USSR)

ABSTRACT: The present paper ("Letter to the Editor") is based upon two earlier papers (Refs 1,2) by the same authors. In the first, the electronic thermal conductivity κ_e of superconductors was investigated, and the latter investigates the phonon thermal conductivity κ_p in dependence on phonon-electron collisions. The present paper shows that the temperature dependence of κ_e and κ_p derived in references 1 and 2 may serve as an explanation of the experimental data today available on thermal conductivity. According to reference 2 it holds that $\kappa_p^s = \kappa_p^n F(T)/F(T_k)$; the index s denotes the superconductive -

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